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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,803	04/20/2006	Eric Dallies	273903US0PCT	5036
22850	7590	08/16/2010	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			GRAY, JILL M	
			ART UNIT	PAPER NUMBER
			1782	
			NOTIFICATION DATE	DELIVERY MODE
			08/16/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/539,803	<b>Applicant(s)</b> DALLIES ET AL.	
	<b>Examiner</b> Jill Gray	<b>Art Unit</b> 1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Pursuant to the entry of the amendment of June 2, 2010, the status of the claims is as follows: Claims 1-4 and 6-18 are pending. Claims 1 and 7 are amended.

#### ***Response to Amendment***

2. The rejection of claims 1 and 7 under 35 U.S.C. 112, second paragraph is moot in view of applicants' amendments.

3. The rejection of claims 1-4, 7-10, 12-14, and 17-18 under 35 U.S.C. 102(b) as being anticipated by Modrak 5,846,654 is moot in view of applicants' amendments.

#### ***Claim Rejections - 35 USC § 102***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-4, 6-11, 13-14, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Publication EP 1044939 (translation), for reasons of record.

#### **Regarding Independent claim 1**

The translation discloses a polyolefin fiber for reinforcing products based on fibers and a hydraulic-setting substance comprising a size that is a mixture of "SILASTOL cut5A", an ester of polyglycole of fatty acid and "SILASTOL cut 5B", fatty alcohol phosphate mixture. See [0001] and [0063]. This mixture is the same as that set forth by applicants in their specification as being suitable. Accordingly, it is the examiner's position that this mixture has the function which assists the fiberizing operation, a function in which the fiber can be wetted by the composition of the

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hydraulic-setting substance, and a function of promoting adhesion to the hydraulic-setting substance, as required by present claim 1. In addition, the translation discloses that the size is present on the fiber in an amount of 0.15% to 1.5% by weight of dry matter compared to the fiber weight. See [0070].

Regarding dependent claims 2-4, 6-11, 13-14, and 17-18

Regarding claim 2, the translation discloses that the polyolefin fibers can be polypropylene fibers. See [0001].

Regarding claims 3-4, the translation discloses fibers having a titre and tenacity within the present claimed ranges. See [0068].

Regarding claim 6, the translation discloses that the size is applied as a dispersion.

Regarding claims 7-8, the translation discloses adding the aforementioned fiber to a hydraulic-setting substance and products produced therefrom. [0053].

Regarding claim 9, the translation discloses products having from 0.3 to 4% by weight of fibers relative to the total dry weight of the mixture. See [0054].

Regarding claim 10, the translation discloses a corrugated plate. See [0061].

Regarding claim 11, the translation discloses that the shaped products can be manufactured by a process comprising a mixture based on hydraulic binder, fibers and water, draining, and shaping the product (see [0003]), further disclosing the Hatschek process as being known. See [0004]-[0005]. This the same process disclosed by applicants. Therefore, the examiner has reason to believe that the process disclosed by the translation results in the same process steps as required by present claim 11.

Regarding claims 13-14 and 17-18, the translation discloses a size that comprises at least a product based on fatty acid polyethylene glycol ester and phosphoric acid ester compounds and at least a product based on fatty acid derived polyethylene glycol ester.

Therefore, the teachings of the translation anticipate the invention as claimed in present claims 1-4, 6-11, 13-14, and 17-18.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-4, 6-10, 12-14, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Modrak, 5,846,654.

Regarding Independent claim 1

Modrak discloses a polyolefin fiber that can be used for the reinforcement of products based on fibers and a hydraulic-setting substance, said fibers comprising a finish that can include (for example) mixtures of ethoxylated fatty acid esters and ethoxylated alcohol phosphates, or mixtures of polyethylene glycol 400 monolaurate and polyoxyethylene(5) tridecylphosphate neutralized with diethanolamine. More specifically, Modrak discloses fibers comprising a finish comprising a product based on fatty-acid polyethylene glycol ester and phosphoric acid ester compounds or a product based on a fatty acid derived polyethylene glycol ester. See entire document, and for example the abstract, and column 8, line 57 through column 9, and line 38. In addition, Modrak discloses that the finish provides properties that may be desired for processing

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the fibers and renders the fibers dispersible in a water-concrete mixture. Note column 8, lines 59-64. This teaching renders obvious the required "size carries a function which assists the fiberizing operation, a function in which the fiber can be wetted by the composition of the hydraulic-setting substance, and a function of promoting adhesion to the hydraulic-setting substance". Furthermore, the finish composition of Modrak is the same as the size contemplated by applicants in present claim 1, therefore, the examiner would have reason to believe that composition of Modrak would function in the same manner as said size. The same composition necessarily has the same properties, and hence, it is the examiner's position, would function in the same manner.

Modrak does not specifically teach the amount of size present on the fiber.

In this regard, it is the examiner's position that it would have been obvious to the skilled artisan during routine experimentation to determine the optimum range of add on of the finish to result in enhanced processing conditions and dispersibility of the fibers in the matrix material.

Regarding dependent claims 2-4, 6-10, 12-14 and 17-18

Regarding claim 2, Modrak discloses that the polyolefin can be polypropylene. See abstract.

Regarding claim 3, Modrak discloses that the fibers can have a denier (fineness) of about 0.5-100 dpf (0.055 to 111.111 dtex), most preferably about 8-16 dpf (8.88-17.77 dtex). This teaching renders obvious the present claimed range of a titre (fineness) of between 0.5 and 10dtex. See column 7, lines 7, lines 9-11 and Examples.

Regarding claim 4, Modrak discloses that his fibers have a tenacity of at least about 10 g/d (8.826 cN/dtex). This teaching renders obvious the requirement of present claim 4 of a tenacity of at least 4 cN/dtex. See column 3, lines 52-56 and Examples.

Regarding claim 6, Modrak does not specifically disclose how the size is applied. However, the general requirements of claim 6 embody all nature of application of a spin finish, i.e. the specific components itself or in a solution or dispersion or emulsion, wherein either of these is aqueous based or based on another suitable liquid vehicle. Hence, the requirements of this claim are not construed to be inventive. In addition, the teaching of Modrak that the finish can be applied to the fibers renders obvious the requirement that the size is applied alone.

Regarding claims 7-8, Modrak discloses a method of reinforcing a product based on fibers and a hydraulic-setting substance comprising adding a fiber to the hydraulic-setting substance. See column 7, line 54 through column 8, line 28, and lines 62-64.

Regarding claim 9, Modrak discloses the fibers are added in an amount of from about 0.01wt% to about 5 wt%. See column 8, lines 24-25.

Regarding claim 10, Modrak discloses that the product can be a board. See column 8, lines 19-20.

Regarding claim 12, Modrak does not specifically disclose a mortar composition. However, Modrak discloses matrix materials such as cement, Portland cement, asphalt-based compositions, water-settable inorganic mixtures, and concrete board materials. This teaching clearly suggests the usage of mortar. Accordingly, it would have been

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obvious to the skilled artisan to form a mortar composition comprising a hydraulic binder and the aforementioned fibers.

Regarding claims 13-14 and 17-18, as set forth above and incorporated herein, Modrak discloses a product based upon fatty acid polyethylene glycol ester and phosphoric acid ester compounds, and/or a product based on a fatty acid derived polyethylene glycol ester.

Therefore, the teachings of Modrak would have rendered obvious the invention as claimed in present claims 1-4, 6-10, 12-14, and 17-18.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Publication EP 1044939 (translation), as applied above to claims 1-4, 6-11, 13-14, and 17-18.

The translation is as set forth above, but does not specifically disclose mortar as the binder.

Regarding claim 12, the translation discloses matrix materials such as cement, Portland cement, plaster, and water-settable inorganic mixtures. This teaching clearly suggests the usage of mortar. Accordingly, it would have been obvious to the skilled artisan to form a mortar composition comprising a hydraulic binder and the aforementioned fibers.

Therefore, the teachings of the translation would have rendered obvious the invention as claimed in present claim 12.



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9. Claims 1-4 and 6-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Publication EP 310,100 (Hansen), in view of "CITHROL" product information, cited to show the state of the art.

Hansen discloses polypropylene fibers for reinforcement of products based on fibers and a hydraulic-setting substance and products produced therewith, said fibers having a coating thereon, per claims 1-2, 7-8, 10 and 12. See entire document, for example, abstract, page 4, lines 39-42. Also, Hansen discloses, as examples, several suitable surfactants, including "CITHROL A". It should be noted that the "CITHROL" products are surfactants based upon fatty acid derived polyethylene glycol esters. Accordingly, it is the examiner's position that the teachings of Hansen would have provided a suggestion to the skilled artisan for using a surfactant of the type contemplated by applicants, namely, a nonionic surfactant or product based upon a fatty acid derived polyethylene glycol ester. In addition, Hansen discloses that the coating is present on the fibers in an amount ranging from 0.15 to 3.0% by weight and that the fibers are added to the hydraulic in an amount of about 1.5 to 3% by weight, as required by claims 1 and 9. See page 4, lines 45-48 and page 6, lines 7-24. Also, Hansen discloses that the antistatic coating is applied in any of the manners set forth in present claim 6, and that the process is manufactured according to a process that is essentially as claimed in present claim 11. See Examples.

As to claim 3, this limitation is drawn to the size of the polypropylene fibers, wherein changes of size are not a matter of invention, in the absence of factual evidence to the contrary. As to claim 4, it would have been obvious to the skilled artisan

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to choose fibers of a specific tenacity commensurate with the desired end use. For example, fibers to be used in the formation of ballistic articles would suitably be chosen with a different tenacity than fibers to be used in the formation of a diaper. Regarding claims 13-18, it is the examiner's position that these claims are no more than a preferential selection of a known sizing agent from among many being selected for its art recognized purpose. Accordingly, this would have been an obvious variant to the skilled artisan in the absence of clear factual evidence of superior or unexpected properties that are directly related to said sizing agent. Moreover, the teachings in Hansen of surfactants such as "CITHROL" would have provided a suggestion to the skilled artisan for agents comprising fatty acid derived polyethylene glycol esters.

Therefore, the teachings of the prior art would have rendered obvious the invention as claimed in present claims 1-4 and 6-18.

### ***Response to Arguments***

10. Applicant's arguments filed June 2, 2010 have been fully considered but they are not persuasive.

Applicants argue that in comparative Examples 1 and 3, "CRACKSTOP" commercial product was compared to the invention fibers and the summary information in Tables 1 and 2 indicate that the invention fibers possess improved properties as compared to "CRACKSTOP", and thus, not all coated polyolefin fibers are the same, some are better than others, further arguing that this is the significance of the present invention, providing improved polyolefin fibers which are neither taught nor suggested by the applied art.

Applicants' comparative examples have been noted. However, the comparative data in the specification is insufficient to overcome the prior art rejections under §103 because there is no comparison of the present invention and the cited prior art. Also, the showing in the specification is not commensurate in scope with the present claims because claim 1 is not drawn to any specific sizing composition or amount of product contained. Examples 1 and 3 are more specific to the size composition, and claim 1 is not limited to the specific composition of Examples 1 and 3, for example 80% by weight of Cut5A and 20% of Cut5B as seen in Example 1.

Applicants argue that EP 939 does not teach the claimed invention.

The examiner disagrees for the reasons stated above in paragraph 5.

Applicants' remark of "[t]his is particularly true for claims 15 and 16 which were not rejected over Modrak" has been noted. However, this statement is not germane.

Applicants argue that neither Modrak nor the combination of Hansen and Cithrol suggest the claimed invention.

The examiner disagrees for the reasons set forth above in paragraphs 6 and 9.

Applicants' remark of "[t]his is particularly true for claims 15 and 16 which were not rejected over EP 939" has been noted. However, this statement is not germane.

Applicants argue that Hansen does not suggest the required sizing agents which yield the associated functionality of the claimed fibers, whereas sizing agents containing only the specified antistatic agents in the applied art would yield inferior products having inferior properties.

In response thereto, there is no clear factual evidence on this record, by way of back-to-back comparison of the applicable prior art and the instant invention to substantiate applicants' allegation. In addition, Hansen discloses that surfactants can be used and that said surfactants can be applied during the fiberization process, are wetting agents and aid in dispersibility of the fibers in the matrix material. This teaching would have rendered obvious the present claimed functionality.

Applicants argue that Hansen does not provide any specific guidance as to which sizing agent to use which would lead one of ordinary skill in the art to the claimed agents, further arguing that the Office Action does not and cannot point to any specific disclosure of the required sizing agents in either of the applied European applications.

The examiner disagrees. In particular, Hansen discloses, as examples, several suitable surfactants, including "CITHROL A". It should be noted that the "CITHROL" products are surfactants based upon fatty acid derived polyethylene glycol esters. Accordingly, it is the examiner's position that the teachings of Hansen would have provided a suggestion to the skilled artisan for using a surfactant of the type contemplated by applicants, namely, a nonionic surfactant or product based upon a fatty acid derived polyethylene glycol ester.

Applicants argue that for claims 13, 14, 17, and 18, neither Szekely nor Hansen discloses fibers containing sizing agents comprising fatty-acid-derived polyethylene glycol ester, and their fibers yield inferior products, further arguing that this is particularly true for claims 13-16.

The examiner is not sure who Szekely is. As to Hansen, again, there is no factual evidence on this record, by way of back-to-back comparison of the applicable prior art and the instant invention to substantiate applicants' allegation. Absent such evidence, this argument is unconvincing and is merely drawn to attorney arguments. Also as set forth previously, Hansen discloses, as examples, several suitable surfactants, including "CITHROL A". It should be noted that the "CITHROL" products are surfactants based upon fatty acid derived polyethylene glycol esters.

No claims are allowed.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524.

The examiner can normally be reached on M-Th and alternate Fridays 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/  
Primary Examiner  
Art Unit 1782

jmg